

S/N 10/042,823

Response to Office Action Dated 06 July 2006

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REMARKS

A review of the claims indicates that:

- A) Claims 11, 12, 25—29 and 44 remain in their original form.
- B) Claims 1—10, 15—24 and 31—42 are currently amended.
- C) Claims 13, 14, 30 and 43 are currently cancelled.

In view of the following remarks, Applicant respectfully requests reconsideration of the rejected claims.

Traversal of the §102 Rejections

Claim 44 was rejected under §102 as being anticipated by U.S. Application No. 20020122106, hereinafter "Ylitalo." In response, the Applicant respectfully traverses the rejection.

Claim 44 recites a method for use in a printing device, the method comprising:

- determining dot gain requirements; and
- selectively altering an ink application order based on said determined dot gain requirements.

The Ylitalo reference was filed after the Applicant's application. Accordingly, the Applicant submits that the Ylitalo reference is not prior art. The Ylitalo application claims priority to an earlier filed provisional application. However, the provisional application is substantially different from the subsequent non-provisional application.

The Applicant recites "altering an ink application order" based on dot gain requirements. The Applicant respectfully submits that Ylitalo does not disclose that an ink application order is altered to control dot gain.

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1 In contrast, Ylitalo discusses altering the time between printing and curing
2 by controlled application of heat. The Ylitalo provisional discusses desired dot
3 gain amounts and the need to cure the dot (ink) when the gain is at a desired level.
4 To cure the dot (e.g. by drying the ink), Ylitalo discloses controlling the time
5 between printing and curing. The time to cure is controlled by controlling the
6 timing of heat application. Essentially, use of heat allows control over the time the
7 dot has to grow. See page 2 of the provisional, last paragraph. However, Ylitalo
8 does not disclose that the order of ink application can be altered based on dot gain
9 requirements.

10 Therefore, the Ylitalo reference fails to disclose the elements recited by the
11 claim. Accordingly, the applicant respectfully requests that the Section 102
12 rejection of Claim 44 be withdrawn.

13 Traversal of the §103 Rejections

14 Claims 1—7, 11—18, 21—24, 28 and 29 stand rejected under 35 U.S.C.
15 §103(a) as being obvious over U.S. Pat. No. 6,540,329, hereinafter “Kaneko,” in
16 view of U.S. Pat. No. 6,322,187 hereinafter “Wyble.” In response, the Applicant
17 respectfully traverses the rejection.

18
19 **Claim 1** recites a method of printing according to a selectable print mode,
comprising comprising:

- 20 • selecting between a dark dot gain print mode and an object
21 definition print mode, wherein the print modes produce
22 different output, such that the dark dot gain print mode
enhances photographic image quality and the object definition
print mode enhances object edge definition;
 - 23 • wherein printing in the dark dot gain print mode comprises:
 - 24 • applying at least one dark color ink to a dry portion of a print
media; and
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- applying at least one light color ink to said portion of said print media that is still wet following said application of said at least one dark color ink; and
- wherein printing in the object definition print mode comprises; and
 - applying at least one light color ink to a dry portion of the print media; and
 - applying at least one dark color ink to said portion of said print media that is still wet from the application of said at least one light color ink.

Claim 7 has been similarly amended, and recites, inter alia, “wherein the print modes produce different output, such that the dark dot gain print mode enhances photographic image quality and the object definition print mode enhances object edge definition”.

Claim 24 has been similarly amended, and recites, inter alia, “wherein the print modes produce different output, such that the dark dot gain print mode enhances photographic image quality and the object definition print mode enhances object edge definition”.

The Applicant submits that the Kaneko reference does not disclose, “print modes (that) produce different output”, as recited by the claim, as amended. Instead, Kaneko discloses two print modes, one for use in each direction traveled by the printhead, *so that the output is the same*. In fact, the goal of Kaneko is to remove the differences in the appearance of print output made when the printhead is traveling left-to-right vs. right-to-left.

Referring to Kaneko at column 4, lines 42—46, Kaneko realizes that the printhead changes direction periodically, resulting in different ink application orders. Accordingly, Kaneko addresses the problem of how to apply inks in different orders, but maintain output of the same appearance—regardless of

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1 printhead direction and regardless of ink application order. That is, Kaneko
2 specifically strives to diminish "the effect of the application order of the color ink
3 and the black ink on the evenness of the image" (see column 6, lines 25—27).
4 Thus, Kaneko teaches a system and method by which inks can be put onto print
5 media in different orders, but still result in the same appearance. This is in
6 contrast to the claim, which recites that the print modes produce different output,
7 such as required for photographs and graphics requiring more precise object edge
8 definition.

9 In particular, Kaneko teaches that the black ink includes a salt, which
10 results in low penetrability and solid-liquid separation (see column 9, lines 17—
11 23). Thus, Kaneko teaches that a black ink having salt reacts in such a way to
12 result in the same output, without regard to the direction of printhead movement
13 (i.e. without regard to the order of ink application). (See column 9, lines 17—62.)

14 Thus, Kaneko fails to teach or suggest the elements of the Applicant's
15 claim, as amended. Kaneko teaches "suppression" of differences in image density
16 due to changes in ink application order (see column 9, lines 63—65). In contrast,
17 the Applicant's amended claims recite "print modes (that) produce different
18 output" depending on the order of ink color application.

19 The Patent Office points to column 9, at lines 24—62 and column 6, line 64
20 to column 7, line 1. These passages discuss the application of a salted black ink
21 and color inks. In different locations, the passages discuss application of the black
22 ink first, and also application of the black ink second.

23 The passages cited by the Office fail to disclose two modes that produce
24 different print outputs, as recited by the Applicant's claims, as amended. In
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1 contrast, Kaneko teaches use of salts in the black ink that result in the same output,
2 even when the inks (color and black) are applied in different sequential orders.
3 Accordingly, Kaneko teaches a left-to-right mode and a right-to-left mode
4 (direction of printhead travel) wherein uniform print output is achieved. The
5 uniform output is achieved even in an environment of alternating modes wherein
6 the ink order is reversed with each passage of the printhead.

7 Accordingly, Kaneko fails to teach or suggest the Applicant's amended
8 claim. Kaneko teaches modes associated with the two directions of printhead
9 travel, and teaches that the same output results for both ink application orders
10 (black first and black second). Kaneko fails to teach or suggest two print modes,
11 wherein the ink application orders are reversed, including a dot gain mode and an
12 object definition mode that result in different print output. Kaneko additionally
13 fails to teach or suggest associating a mode with photographs and a mode with
14 higher-definition graphics.

15 Therefore, the Kaneko reference fails to teach or suggest the elements
16 recited by the claim. Moreover, the Wyble reference fails to remedy the
17 deficiencies of Kaneko. Accordingly, the applicant respectfully requests that the
18 Section 102 rejection of Claim 44 be withdrawn.

19 Claims 2, 3, 5, 6, 8—12, 14—23, 25—29 and 31—42 depend from Claims
20 1, 7 and 24, and are allowable as depending from an allowable base claim. These
21 claims are also allowable for their own recited features that, in combination with
22 those recited in Claims 1, 7 and 24, are neither disclosed nor suggested in
23 references of record, either singly or in combination with one another.

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In the interests of promoting prosecution of this application, the Applicant has cancelled a number of claims. This is not to be construed as a reflection of the Applicant's opinion on the allowability of any of the subject matter contained in these claims. Rather, the cancellations reflect the need to limit the Applicant's burden in further prosecuting this case.

Conclusion

The Applicant has amended a number of claims to more clearly define the elements recited by the claims. Independent Claim 44 remains in original condition.

The Applicant submits that all of the claims are in condition for allowance and respectfully requests that a Notice of Allowability be issued. If the Office's next anticipated action is not the issuance of a Notice of Allowability, the Applicant respectfully requests that the undersigned attorney be contacted for the purpose of scheduling an interview.

Respectfully Submitted,

Dated: Oct 6 Sept 2006By: 

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